CURRY, JOHN M. (JSC-DA8) (NASA), 03:42 AM 2/9/2003, RE: Fairfield, CA video/website

John M. Curry Flight Director, JSC-DA8 Work: 281-244-1029; john.m.curry1@jsc.nasa.gov

CONOVER, SHARON C. (JSC-OA) (NASA), 02:21 PM 2/14/2003, Conover moving back to B1

From: "CONOVER, SHARON C. (JSC-OA) (NASA)" <sharen.c.conover@nasa.gov>

To: DL ESAT <DL-ESAT@ems.jsc.nasa.gov>

Subject: Conover moving back to B1 Date: Fri, 14 Feb 2003 12:21:07 -0600 X-Mailer: Internet Mail Service (5.5.2653.19)

ESAT Team Members.

My OA mgmt (B. Kelly) has requested that I return back to the office starting this afternoon. I will continue to support MRTs to keep OA mgmt informed. I am truly impressed with the contribution and progress this team has made to the overall accident investigation. Keep up the great work. Call me if you need me!

God Speed, Sharon C. Conover NASA/FCO

281-244-8158 office sharon.c.conover@nasa.gov

KOERNER/CATHERINE A/(CATHY) (JSC-DA8) (NASA), 42/39 PM 2/14/2003, FW: MCC/Video Releases

From: "KOERNER, CATHERINE A: (CATHY) (JSC-DA8) (NASA)"

<catherine.a.koerner@nasa.gov>

To: DL ESAT <DL-ESAT@ems.jsc.nasa.gov>

Subject: FW: MCC Video Released Today

Date: Fri, 14 Feb 2003 10:39:35 -0600

X-Mailer: Internet Mail Service (5.5.2653.19)

FYI

- > ----Original Message----
- > From: HEFLIN, JAMES M., JR (MILT) (JSC-DA8) (NASA)
- > Sent: Friday, February 14, 2003 10:30 AM
- > To: DL DA8 Personnel; DL MOD OFC/DIV CHIEFS
- > Subject: MCC Video Released Today
- >
- > I have been told that we will be releasing a 20-minute video of the WFCR
- > shot during the event on NASA TV at 1100 today. Also, LeRoy Cain will be
- > doing a press conference at 1400 today.
- > Milt
- >
- > J. Milt Heflin
- > Chief, Flight Director Office
- > NASA JSC/DA8
- > 4N/309
- > 281-483-5428
- > Fax 281-483-3304

>

From: "FENNELLY, JASON L. (JSC-GA) (IDI)" <iason.l.fennelly1@jsc.nasa.gov> To: "HILL, PAUL S. (JSC-DA8) (NASA)" <paul.s.hill@nasa.gov>, ANTHONY CECCACCI <anthony.j.ceccacci@nasa.gov>, CHARLES BOEHL <charles.boehl1@jsc.nasa.gov>, DAVID THARP <david.tharp1@jsc.nasa.gov>, DL ESAT <DL-ESAT@ems.jsc.nasa.gov>, DONN LIDDLE <donn.a.liddle1@isc.nasa.gov>. EDWARD WILSON <edward.b.wilson@nasa.gov>, EILEEN HAWLEY <eileen.m.hawley@nasa.gov>, **EILEEN WALSH** <eileen.walsh1@jsc.nasa.gov>, GREGORY BYRNE < gregory i.byrne@nasa.gov>, imserbrv <imserbrv@ems.jsc.nasa.gov>, JAMES MCALPIN <iames.mcalpin1@jsc.nasa.gov>, JANET SALAZAR <janet.l.salazar1@jsc.nasa.gov>, JASON FENNELLY <jason.l.fennelly1@jsc.nasa.gov>, JEANNE NEWMAN <ieanne.m.newman1@jsc.nasa.gov>, JEFFREY VAN PELT <jeffrey.l.vanpelt1@jsc.nasa.gov>, JENNIFER LESTOURGEON <jennifer.l.lestourgeon@nasa.gov>, JONATHAN DISLER <ionathan.m.disler1@jsc.nasa.gov>, JULIE ROBINSON <julie.a.robinson1@jsc.nasa.gov>, KELLY BECK <kelly.b.beck@nasa.gov>, MARSHA IVINS <marsha.s.ivins@nasa.gov>, PATRICK CHIMES <patrick.j.chimes@nasa.gov>, RICHARD CANTER <richard.f.canter1@jsc.nasa.gov>, "S. SMITH" <s.m.smith1@jsc.nasa.gov>, SHERYL LOCKE <sheryl.d.locke@nasa.gov>. SILVIA STEWART <silvia.stewart1@isc.nasa.gov>, STEPHEN FRICK <stephen.n.frick@nasa.gov>, SUSAN ZARELLA <susan.c.zarella1@jsc.nasa.gov> Subject: RE: ESAT MRT status - 2/12 Date: Wed, 12 Feb 2003 08:35:11 -0600

The Las Vegas-NV 250X telescope CD's arrived late yesterday. Disc 1 is a

X-Mailer: Internet Mail Service (5.5.2653.19)

zipped .AVI movie file. This will be mastered to Digibeta, D2 and we'll provide 2 quick look VHS for EOC/MER. We will provide a copy of the CD along with the D2 for SX. The second CD is Bitmap still images exported from Adobe Premiere (a video editing program for computers), 1 image for every frame, 30 frames per second, 2 and half minutes total. The Bitmaps number above a thousand. I have asked the Photolab to hold off processing until we receive specific instructions for processing and numbering those images. That request should be coordinated through Maura White and Patrick Chimes.

Jason Fennelly Mission Video Voice: 281-483-0925

> ----Original Message----

> From: HILL, PAUL S. (JSC-DA8) (NASA)

> Sent: Wednesday, February 12, 2003 8:06 AM

> To: MG Coordinators; DL ESAT; MCCORMACK, DONALD L. (DON) (JSC-MV6)

> (NASA)

> Subject: ESAT MRT status - 2/12

> Importance: High

>

> << File: MRT - ESAT 2-12.ppt >>

KOERNER, CATHERINE A. (CATHY) (JSC-DA8) (NASA), 01:52 PM 2/14/2003, FW: Update to LeRoy

From: "KOERNER, CATHERINE A. (CATHY) (JSC-DA8) (NASA)"

<catherine.a.koerner@nasa.gov>
To: DL ESAT <DL-ESAT@ems.jsc.nasa.gov>
Subject: FW: Update to LeRoy Cain Press Briefing

Date: Fri, 14 Feb 2003 11:52:09 -0600 X-Mailer: Internet Mail Service (5.5,2653,19) > ----Original Message----> From: HEFLIN, JAMES M., JR (MILT) (JSC-DA8) (NASA) > Sent: Friday, February 14, 2003 11:37 AM > To: ` DL DA8 Personnel; DL MOD OFC/DIV CHIEFS > Subject: Update to LeRoy Cain Press Briefing > ...thanks Greg! > ----Original Message-----> From: LANGE, GREGORY A. (JSC-DA8) (NASA) Friday, February 14, 2003 11:34 AM > Sent: > To: HEFLIN, JAMES M., JR (MILT) (JSC-DA8) (NASA) > Subject: RE: MCC Video Released Today > Milt. > LeRoy will be on at 2:30, preceded by a replay of the White FCR tape (just > shown at 11 this morning) at 2. > I called the Newsroom and confirmed - see the excerpt from the press > release below. > http://www.spaceref.com/news/viewpr.html?pid=10748 > Leroy Cain, the flight director who oversaw the ascent and entry of the > Space Shuttle Columbia on Feb 1, 2003, from Mission Control, Houston, will > hold a press conference beginning at 3:30 p.m. EST, Friday, February 14 > from the Johnson Space Center, Houston. The briefing will be carried live > on NASA Television. > Prior to the start of the press briefing, at Noon and at 3 p.m. EST, a > videotape of events inside the Space Shuttle Flight Control Room will air > on NASA TV. It will include the audio of the Flight Director's > conversations with his flight control team and air-to-ground > communications between Mission Control and the Shuttle Columbia. > ----Original Message-----> From: HEFLIN, JAMES M., JR (MILT) (JSC-DA8) (NASA) > Sent: Friday, February 14, 2003 10:30 AM > To: DL DA8 Personnel; DL MOD OFC/DIV CHIEFS

KOERNER, CATHERINE A. (CATHY) (JSC-DA8) (NASA), 01:52 PM 2/14/2003, FW: Update to LeRoy

- > Subject: MCC Video Released Today
- > I have been told that we will be releasing a 20-minute video of the WFCR
- > shot during the event on NASA TV at 1100 today. Also, LeRoy Cain will be
- > doing a press conference at 1400 today.
- > Milt
- >
- > J. Milt Heflin
- > Chief, Flight Director Office
- > NASA JSC/DA8
- > 4N/309
- > 281-483-5428
- > Fax 281-483-3304
- >

bburns@hq.nasa.gov, 10:11 AM 2/10/2003, movie

To: bburns@hq.nasa.gov>
From: Michael Card <mcard@hq.nasa.gov>

Subject: movie

Cc: Bcc: Attached:

http://www.floridatoday.com/columbia/

hcat@hq.nasa.gov, boconnor@hq.nasa.gov, jlloyd@hq.nasą.gov, 12:22 PM 2/8/2003, Florida Toda

To: hcat@hq.nasa.gov, boconnor@hq.nasa.gov, jlloyd@hq.nasa.gov From: Michael Card <mcard@hq.nasa.gov>

Subject: Florida Today Web Link

Cc: Bcc:

Attached:

Web link is http://www.floridatoday.com/columbia/ for public domain video.

michael.l.ciancone@nasa.gov, 12:11 PM 2/3/2003, STS-107 Payloads

To: michael.l.ciancone@nasa.gov

From: Michael Card <mcard@hq.nasa.gov>

Subject: STS-107 Payloads

Cc: Bcc: Attached:

Mike, I have been asked to pull together as much background information as possible on STS-107 payloads in anticipation of support for Bryon O'Connor. As a start do you have a complete list of payloads and a summary of respective safety issues, or please tell me where I might find such data. I quess you may be working on a similar type of analysis. Pleae call me 202-358-4481 so that we can talk. thanks. Mike Card

pete Rutledge, 07:17 PM 2/3/2003, Fwd: RE: STS-107 Payloads

To: pete Rutledge <prutledg@hq.nasa.gov> From: Michael Card <mcard@hq.nasa.gov> Subject: Fwd: RE: STS-107 Pavloads

Cc: Bcc: Attached:

Payload data requested, see below. Mike

From: "CIANCONE, MICHAEL L. (JSC-NC) (NASA)" <michael.l.ciancone@nasa.gov>

To: "MORELAND, DEAN (JSC-NC) (NASA)" <dean.moreland-1@nasa.gov>

Cc: "CIANCONE, MICHAÈL L. (JSĆ-NC) (NASA)" < michael.l.ciancone@nasa.gov>,

"CARD, MIKE (JSC-REMOTE)" <mcard@hq.nasa.gov>

Subject: RE: STS-107 Payloads

Date: Mon, 3 Feb 2003 16:26:04 -0600 X-Mailer: Internet Mail Service (5.5.2653.19)

Dean,

Mike is interested in essentially the same info that we're preparing for others, i.e., the beefed up payload safety summary. In addition, he needs enough info to assess whether or not payloads contributed in some fashion to the loss of Columbia. Please include him on dist when this info becomes available. And reflect on the doc log at that time.

М

----Original Message----

From: CARD, MIKE (JSC-REMOTE)

Sent: Monday, February 03, 2003 10:12 AM To: CIANCONE, MICHAEL L. (JSC-NC) (NASA)

Subject: STS-107 Payloads

Mike, I have been asked to pull together as much background information as possible on STS-107 payloads in anticipation of support for Bryon O'Connor. As a start do you have a complete list of payloads and a summary of respective safety issues, or please tell me where I might find such data. I quess you may be working on a similar type of analysis. Pleae call me 202-358-4481 so that we can talk. thanks. Mike Card

To:

From: Michael Card <mcard@hq.nasa.gov>

Subject: Fwd: Excite News

Co: Bcc: Attached:

Boeing has a vested interest in results. See below. Mike

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-q using -f

X-Sender: mstamate@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Thu, 13 Feb 2003 15:26:49 -0500

To: code-q@lists.hq.nasa.gov

From: Michael Starnatelatos <mstarnate@hq.nasa.gov>

Subject: Fwd: Excite News

Sender: owner-code-q@lists.hq.nasa.gov

For your information.

Date: Thu, 13 Feb 2003 14:36:17 -0500

From:

Reply-To:

Organization: Science Applications

X-Mailer: Mozilla 4.79 (Macintosh; U, PPC)

X-Accept-Language: en

To: 1

"Railsback, Jan" <jan.railsback1@jsc.nasa.gov>, Michael Stamatelatos <mstamate@hq.nasa.gov>

Subject: Excite News

FYI

http://apnews.excite.com/article/20030213/D7P5UILG2.html

Landing Gear Suspect in Shuttle Disaster

Email this Story

Feb 13, 1:52 PM (ET)

By TED BRIDIS

WASHINGTON (AP) - NASA confirmed Thursday one sensor aboard Columbia indicated its left landing gear was improperly lowered moments before it disintegrated over Texas as it raced through earth's atmosphere at more than 12,000 miles per hour. But it said other sensors conflicted with those readings.

The disclosure focused renewed attention on possible catastrophic failures inside Columbia's wheel compartment inside its left wing that may have attributed to the mysterious breakup.

Safety engineers believe an unusually large chunk of flyaway foam from Columbia's external tank struck the shuttle on liftoff and may have damaged delicate insulating tiles near that area, but they concluded Columbia could return safely.

NASA spokesman William Jeffs at Johnson Space Center confirmed that one sensor indicated Columbia's gear was lowered as it raced over Texas at 209,000 feet and flying at 18 times the speed of sound - far too high and too fast for that to happen. But Jeffs cautioned that two other sensors at the time indicated the gear was still properly raised.

"We're not certain if the readings showed the landing gear deployed or were the result of a faulty sensor that sent bad data," Jeffs said. "One indicated (the wheel) was down and locked, and that was shortly before radio contact with the orbiter was lost."

NASA dislosed Wednesday that a safety engineer wrote two days before Columbia's mysterious breakup about risks to the shuttle from "catastrophic" failures caused by tires possibly bursting inside the spacecraft's wheel compartment from extreme heat.

Robert H. Daugherty, responding to an inquiry from Johnson Space Center, cautioned in an e-mail to NASA colleagues that damage to delicate insulating tiles near Columbia's landing gear door could cause one or more tires inside to burst, perhaps ending with catastrophic failures that would place the seven astronauts "in a world of hurt."

Such an explosion inside Columbia's belly, Daugherty predicted, could blow out the gear door and expose the shuttle's unprotected innards to searing temperatures as it raced through earth's atmosphere.

Ret. Admiral Harold Gehman, who heads the panel investigating the Columbia accident, on Thursday called Daugherty's e-mail "one of the many, many interesting leads that we have."

On the same day NASA disclosed the contents of Daugherty's e-mail, searchers near Hemphill, Texas, about 140 miles northeast of Houston, recovered what they believed to be one of Columbia's tires.

The tire was blackened and sustained a massive split across its tread, but it was impossible from photographs to know whether the tire was damaged aboard Columbia or when it struck the ground.

NASA officials in Washington and Houston on Thursday said they could not confirm the tire was the shuttle's, but one person familiar with tires on the orbiter looked at a photograph of the tire found in Texas and said it appeared to be from a shuttle.

In his e-mail, which included remarkably strident language, Daugherty wrote that even if astronauts survived the heat, the blast could damage critical systems inside the wheel compartment, prevent the landing gear on one side from lowering, necessitate a risky belly landing or force the crew to bail out.

Bailing out would be "not a good day," he wrote. But attempting to fly the shuttle with only one side's landing gear lowered would be worse: "You're finished."

Flight Director Leroy Cain said Wednesday that investigators were confident the gear door did not fall off in flight because such a failure would have been indicated on sensor readings.

Other NASA officials have cited mysterious sensor readings in the wheel well moments before Columbia's breakup but have said they were confident the tire didn't burst inside the shuttle.

Daugherty acknowledged these were "absolute worst-case scenarios," adding, "I don't really believe things are as bad as I'm getting ready to make them out." But he defended raising the issues in e-mail to avoid a "gut-wrenching decision" days later during Columbia's descent.

Daugherty on Wednesday referred questions about his concerns to a NASA spokesman. Agency officials indicated they did not want reporters to speak with Daugherty because accident investigators had not yet questioned him. NASA disclosed the contents of his e-mail Wednesday.

The e-mail from Daugherty, an engineer at NASA's Langley research facility in Hampton, Va., was prompted by a telephone call Jan. 27 from experts at the Johnson Space Center in Houston who asked what might happen if Columbia's tires were not inflated when it attempted to land.

The inquiry from Johnson has attracted interest because it came four days after engineers at The Boeing Co. (\underline{BA}), a contractor, assured NASA that Columbia could return safely despite damage to left wing tiles that might have occurred on liftoff.

Senior NASA officials said Daugherty's concerns were part of a "what-if" analysis by a small group of engineers who already had been assured that Columbia would land safely. They acknowledged that concerns about threats to the shuttle's tires were not passed along to NASA flight directors.

Milt Heflin, chief of the flight director's office, said Daugherty and others involved in the tire questions "were happy with the analysis and the work that was done" by Boeing. "They were continuing to do more what-if'ing."

An e-mail back to Daugherty the next day from a Johnson Space Center engineer, David F. Lechner of the United Space Alliance LLC, another NASA contractor, thanked Daugherty for his "candid remarks." He said they "generated extremely valuable discussion in our group."

"We hope the debris impact analysis is correct and all this discussion is mute," Lechner wrote.

Another Langley employee, Mark J. Shuart, responded by e-mail later that day, "Looks like they believe all this has been addressed." His message was time-stamped about 20 hours before the shuttle disintegrated.

Senior NASA officials have repeatedly expressed confidence in Boeing's conclusions, which predicted "safe return indicated" even if foam insulation that fell from Columbia's external fuel tank had caused "significant tile damage." That study assumed foam debris struck

part of Columbia's left wing, including its toughened leading edge and the thermal tiles covering the landing gear.

Testifying at a joint congressional hearing Wednesday, NASA Administrator Sean O'Keefe told lawmakers that during Columbia's 16-day mission, "there were no abnormalities that would suggest a problem. If there was any indication, they would have showed up."

Among the earliest warning signs aboard Columbia in the minutes before its demise was an unusual heat buildup of about 30 degrees inside the left wheel well. Investigators have said they are confident the tire inside didn't deflate, but they have been unable to explain the readings.

Articles From AP

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Dr. Michael Stamatelatos
Manager, Agency Risk Assessment Program
NASA Headquarters - Mail Code QE
Office of Safety and Mission Assurance
300 E Street, SW
Washington, DC 20024
Phone: 202/358-1668 Fax: 202/358-2778
E-mail: Michael G. Stamatelatos@nasa.gov
(Please note change in e-mail address)

"Mission success starts with safety"

To:

From: Michael Card <mcard@hq.nasa.gov>

Subject: Fwd: USA Today Depiction of Columbia Data

Cc: Bcc: Attached:

You should see this if you haven't already, mike

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-q

using -f

X-Sender: mkowales@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Fri, 14 Feb 2003 14:50:34 -0500

To: code-q@lists.hq.nasa.gov

From: Mark Kowaleski <mkowales@hq.nasa.gov> Subject: Fwd: USA Today Depiction of Columbia Data

Sender: owner-code-q@lists.hq.nasa.gov

From: "ERMINGER, MARK D. (JSC-NC) (NASA)" <mark.d.erminger@nasa.gov>

To: "H - Kowaleski Mark (E-mail)" <mkowales@mail.hq.nasa.gov>,

"H - Bihner Bill (E-mail)" <wbihner@mail.hq.nasa.gov>,

"H - Hill Bill (E-mail)" <william.hill@hq.nasa.gov>

Subject: USA Today Depiction of Columbia Data Date: Fri, 14 Feb 2003 13:19:58 -0600

X-Mailer: Internet Mail Service (5.5.2653.19)

> This is incredible

>

> http://www.usatoday.com/graphics/news/gra/gshuttle_disaster/flash.htm

jlemke, 10:18:AM 2/12/2003, Ghallenge for Columbia investigators: handling classified

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-qe using -f

X-Sender: jlemke@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Wed, 12 Feb 2003 09:18:23 -0500

To: code-qe@lists.hq.nasa.gov, code-qs@lists.hq.nasa.gov

From: ilemke <ilemke@hq.nasa.gov>

Subject: Challenge for Columbia investigators: handling classified

Sender: owner-code-qe@lists.hg.nasa.gov

6. Challenge for Columbia investigators: handling classified information

COLORADO SPRINGS, Colo. - One challenge facing the board investigating the breakup of the space shuttle Columbia is deciding how to handle potentially sensitive information from a variety of government sensors that monitored the orbiter in its final minutes.

Any data gathered by ground-based missile defense radars, for instance, "could be and probably is classified if it would reveal ... operational capabilities," said Lt. Col. Andy Roake, a spokesman for Air Force Space Command (AFSPC) at Peterson Air Force Base here.

"I know that they're working out the processes" for using such information in the investigation, he said. "The Air Force is committed to providing them with any kind of information that will help. ... It may be just a matter of providing the few people who are part of the investigation [with] that data and basically allowing them to see that on an as-needed basis."

The quantity of data probably won't be a problem. "We have a lot of capability in this country in our national means and there was a lot of attention directed" at the shuttle's return because interest in such events is always high, Michael C. Kostelnik, NASA's deputy associate administrator for the space shuttle program, said last week. He said it's "not unusual ... for a lot of entities to take pictures because it exercises their system on a very useful target. That happens routinely whether you ask for it or not."

Beyond handling sensitive data from specific sensors will be the task of correlating such data from several sensors and linking it to information transmitted by the orbiter itself in its last minutes.

Among government sensors that may offer critical information are Defense Support Program early warning satellites and ground radars, a team intended to help confirm a missile attack. Both have a side mission of helping to monitor objects in space. One DSP satellite is parked over the equator near the East Coast of the U.S and another is located near the West Coast, according to Jeffrey Richelson, an intelligence expert with the Washington-based National Security Archive.

The Ballistic Missile Early Warning System (BMEWS) radars, AFSPC spokesman Roake said, are located at Eglin Air Force Base, Fla.; Thule, Greenland; and Fylingdales, United Kingdom. Two Pave Paws radars, located at Beale Air Force Base, Calif., and Cape Cod, Mass., also are designed to warn of missile attack.

A telescope at the Air Force Research Lab's Starfire Optical Range at Kirtland Air Force Base, N.M., has yielded an image of Columbia in its final

moments, but its precise meaning apparently is not yet clear. Roake said the image was "from a side telescope. It wasn't from the main Starfire optical scope, it was more like a spotting scope ... so it's kind of fuzzy. With the main telescope you could capture images a lot better."

Telescopes of the Ground-based Electro Optical Deep Space Surveillance (GEODSS) system, with one site in Socorro, N.M., may have captured images useful in the investigation, Roake said.

Information from GEODSS and similar systems routinely flows into AFSPC's 1st Space Control Squadron at Cheyenne Mountain, Colo., which normally passes it to NASA so the orbits of shuttles and the International Space Station can be adjusted to avoid space debris.

In the wake of the Columbia disaster, all information gathered by Department of Defense sensors is being sent to accident investigators through U.S. Strategic Command in Omaha, Neb., Roake said.

FENNELLY, JASON L. (JSC-GA) (IDI), 12:13 PM 2/10/2003, E212

From: "FENNELLY, JASON L. (JSC-GA) (IDI)" <jason.l.fennelly1@jsc.nasa.gev>

To: "DISLER, JONATHAN M. (JON) (JSC-SX) (LM)"

<jonathan.m.disler1@jsc.nasa.gov>,
"CARD, MIKE (JSC-REMOTE)"

<mcard@hq.nasa.gov>

Subject: E212

Date: Mon, 10 Feb 2003 10:13:54 -0600 X-Mailer: Internet Mail Service (5.5.2653.19)

Jon, Mike Card from headquarters called me this morning. One of his DOD contacts looked at the KSC Ice and Debris team footage. Mike thinks he may have some information for you. They are looking at a still frame from the Flash footage on Florida Today after the impact dissolves to a cloud. http://www.floridatoday.com/columbia/

Jason Fennelly Mission Video

Voice: 281-244-2331

James Lloyd, 09:18 AM 2/7/2003, Fwd: Re: Questions

X-Authentication-Warning: spinoza.publicahq.hasa.gov: majordom set sender to owner-code-quising -f

X-Sender: jlloyd@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Fri, 07 Feb 2003 08:18:40 -0500

To: code-q@lists.hq.nasa.gov, smadir@hq.nasa.gov

From: James Lloyd <illoyd@hg.nasa.gov>

Subject: Fwd: Re: Questions

Sender: owner-code-q@lists.hq.nasa.gov

Dear All,

I started to write a note to tell you that Bryan is proud of the SMA team and its selfless effort to support the Agency but I thought it better to let Bryan's words speak for him. I add my thanks to your untiring efforts... too bad it had to snow 7 inches here in Washington last evening (I bet it snowed in Cleveland also!), it has complicated an already complex operation. Continue to keep your minds open to all possibilities as causes for this catastrophic loss of crew and vehicle.

Keep your chins high and once in a while pause and take a deep breath to collect your perspective. We've got many days of tough work ahead so meter yourself accordingly. No one person is going to solve this accident in the first week as much as we would like to all do that.

Regards,

X-Sender: boconnor@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Fri, 07 Feb 2003 08:05:37 -0500 To: James Lloyd <jlloyd@hq.nasa.gov> From: boconnor <boconnor@hq.nasa.gov>

Subject: Re: Questions

Jim.

Good show...pass my thanks on to the team.

We were in the debris field 2 days ago.....!'m getting choked up just trying to type this.....the people all over the area are stopping their cars and getting out and putting flowers and small American flags all around pieces of tile and metal and other debris. And the volunteers and police and forest service and FEMA and national guard troops who have all been quickly trained and deputized to record and recover the debris are taking their pictures without removing the flowers and flags out of respect...we had to tell them it was OK!

Again, tell the gang I'm proud of them.

Best.

At 05:46 PM 2/6/2003 -0500, you wrote:

Bryan,

We have decided to provide you the entire list of questions in order to establish a new

baseline. Please discard previous list as this confains all up to 2 PM on Thursday (Thope it doesn't upset any system you have set up). We can assemble a package that has paper copies of everything (questions, offer of assistance, and Q internal actions) through the end of the week if you think you may stop by the office over the week end. Let me know.

Things are progressing well under the circumstances; we are preparing a Q&A batch of topics for Sean O'Keefe for review on the week-end. We have a 9 PM deadline on Friday so people have been assigned chunks of this to work. Paul Pastorak is pulling all the inputs together for the global effort of which we are a part. Michael seems very satisfied with how we have set this process up to assure that we cover the entire spectrum of topical areas for safety and mission success activity for NASA.

Regards, Jim

O'C

Bryan O'Connor Associate Administrator Office of Safety and Mission Assurance

Jim

Pete Rutledge, 10:20 AM 2/6/2003, Your help is needed: Qs and As for Congressional Testimony

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-q using -f

X-Sender: prutledg@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Thu, 06 Feb 2003 09:20:22 -0500

To: code-q@lists.hq.nasa.gov

From: Pete Rutledge <prutledg@hq.nasa.gov>

Subject: Your help is needed: Qs and As for Congressional Testimony

Sender: owner-code-q@lists.hq.nasa.gov

Code Q staff members,

Michael Greenfield has been assigned, by the Administrator, the task of collecting anticipated questions (Qs) along with proposed answers (As) for Mr. O'Keefe's Congressional testimony, which will take place next Thursday, February 13. We have been tasked to collect safety and mission success (SMS) and safety and mission assurance (SMA) related Qs and As. We have to hand in our Qs and As by 9PM tomorrow, Friday, Feb. 7.

Note that by "SMS," we are referring to the Programs' implementation of our requirements (and perhaps other things) in order to achieve safe and successful missions. So some questions may be of this nature; i.e., not merely about what we do. "SMA" refers to those things that our SMA community does to assist NASA programs to achieve safety and mission success.

This task is something we can <u>all</u> help with. Please put your Congress-person hat on and think about what SMS/SMA-related questions pertaining to this mishap (directly or indirectly) might be asked of the Administrator. If you are the expert in the area of your question, please propose the right answer for it. If you are not, then just give us the question. We will keep your name associated with the question so that we can come back to you for more information, if needed.

<u>Please send your Qs, with or without As to Juanita Sandin</u>. She will create a running list of them. Later we will parse them into categories for inclusion in the master list of Qs and As.

Thank you for your help on this.

Pete

Peter J. Rutledge, Ph.D.
Director, Enterprise Safety and Mission Assurance Division
Acting Director, Review and Assessment Division
Office of Safety and Mission Assurance
NASA Headquarters, Code QE, Washington, DC 20546

ph: 202-358-0579 FAX:202-358-2778

e-mail: pete.rutledge@hq.nasa.gov

Mission Success Starts with Safety!

CIANCONE, MICHAEL L. (JSC-NC) (NASA), 12:19 PM 2/3/2003, FW: STS-107 Payloads --

From: "CIANCONE, MICHAEL L. (JSC-NC) (NASA)" < michael.l.ciancone@nasa.gov>

To: "MORELAND, DEAN (JSC-NC) (NASA)" <dean.moreland-1@nasa.gov>

Cc: "CARD, MIKE (JSC-REMOTE)" < mcard@hq.nasa.gov>

Subject: FW: STS-107 Payloads

Date: Mon, 3 Feb 2003 10:19:48 -0600 X-Mailer: Internet Mail Service (5.5.2653.19)

Dean,

Let's give Mike a call after our 10.30a mtg.

Mike,

Dean was the Mission Safety Engineer for STS-107, i.e., he was the lead point of contact for coordinating the Payload Safety effort in support of this mission.

----Original Message----

From: CARD, MIKE (JSC-REMOTE)

Sent: Monday, February 03, 2003 10:12 AM To: CIANCONE, MICHAEL L. (JSC-NC) (NASA)

Subject: STS-107 Payloads

Mike, I have been asked to pull together as much background information as possible on STS-107 payloads in anticipation of support for Bryon O'Connor. As a start do you have a complete list of payloads and a summary of respective safety issues, or please tell me where I might find such data. I quess you may be working on a similar type of analysis. Pleae call me 202-358-4481 so that we can talk. thanks. Mike Card

CIANCONE, MICHAEL L. (JSC-NC) (NASA), 06:26 PM 2/3/2003, RE: STS-107 Payloads and

From: "CIANCONE, MICHAEL L. (USC-NC) (NASA)" < michael.l.ciancone@pasa.goy>

To: "MORELAND; DEAN (JSC-NC) (NASA)" <dean.moreland-1@nasa.gov>

Cc: "CIANCONE, MICHAEL L. (JSC-NC) (NASA)" <michael.l.ciancone@nasa.gov>,

"CARD, MIKE (JSC-REMOTE)" <mcard@hq.nasa.gov>

Subject; RE: STS-107 Payloads-

Date: Mon, 3 Feb 2003 16:26:04 -0600

X-Mailer: Internet Mail Service (5.5.2653.19)

Dean,

Mike is interested in essentially the same info that we're preparing for others, i.e., the beefed up payload safety summary. In addition, he needs enough info to assess whether or not payloads contributed in some fashion to the loss of Columbia. Please include him on dist when this info becomes available. And reflect on the doc log at that time.

M

----Original Message----

From: CARD, MIKE (JSC-REMOTE)

Sent: Monday, February 03, 2003 10:12 AM

To: CIANCONE, MICHAEL L. (JSC-NC) (NASA)

Subject: STS-107 Payloads

Mike, I have been asked to pull together as much background information as possible on STS-107 payloads in anticipation of support for Bryon O'Connor. As a start do you have a complete list of payloads and a summary of respective safety issues, or please tell me where I might find such data. I quess you may be working on a similar type of analysis. Pleae call me 202-358-4481 so that we can talk. thanks. Mike Card

Pete Rutledge, 07:27 PM 2/3/2003, GRC payloads

X-Sender: prutledg@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Mon, 03 Feb 2003 18:27:32-0500

To: mcard@hq.nasa.gov

From: Pete Rutledge <prutledg@hq.nasa.gov>

Subject: GRC payloads

Cc: frank.robinson@grc.nasa.gov, prichard@hq.nasa.gov

Mike,

Frank Robinson called to say he was getting his GRC payload safety people together to independently assess the hazards of the GRC payloads on STS-107 and their potential for having caused a problem with the orbiter.

Pete

Peter J. Rutledge, Ph.D.
Director, Enterprise Safety and Mission Assurance Division
Acting Director, Review and Assessment Division
Office of Safety and Mission Assurance
NASA Headquarters, Code QE, Washington, DC 20546

ph: 202-358-0579 FAX:202-358-2778

e-mail: pete.rutledge@hq.nasa.gov

Mission Success Starts with Safety!

James Lloyd, 09:46 AM 2/4/2003, CAC

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-q using -f

X-Sender: jlloyd@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Tue, 04 Feb 2003 08:46:46 -0500

To: prichard@hq.nasa.gov, prutledg@hq.nasa.gov,

Bill Bihner <wbihner@mail.hq.nasa.gov>

From: James Lloyd <jlloyd@hq.nasa.gov>

Subject: CAC

Cc: code-q@lists.hq.nasa.gov,

"Dr. Michael A. Greenfield" <michael.greenfield@hq.nasa.gov>

Sender: owner-code-q@lists.hq.nasa.gov

Dr. Greenfield is instituting a process for the collection of technical questions and answers and will serve as NASA's technical clearinghouse for release to the outside community. He will be providing details on how this information is to be collected and dispositioned. He has set up an action center (referred to as the CAC) and will chair a meeting each day at 2 pm (location to be provided shortly). Bill Bihner is the Code Q representative and will be attending the meeting starting this afternoon.

I have briefed Dr. Greenfield on our process for providing a list of questions to the CAIB. We will also be involved with supporting Bill Bihner and Dr. Greenfield in developing answers to technical questions where Code Q is the obvious source for the answer. We will also be allowed to review technical answers developed by others as part of the process for Dr. Greenfield's approval for release.

Jim

Pete Rutledge, 10:52 AM 2/4/2003, Information we prepare and provide in support of HCAT and/or

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-q using -f

X-Sender: prutledg@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Tue, 04 Feb 2003 09:52:27 -0500

To: code-q@lists.hq.nasa.gov

From: Pete Rutledge <prutledg@hq.nasa.gov>

Subject: Information we prepare and provide in support of HCAT and/or

the MIT/CAIB

Sender: owner-code-q@lists.hq.nasa.gov

Code Q staff members,

Please make sure Jim or I get to see and initial off on any new material we prepare for the HCAT and/or the MIT/CAIB. This is not necessary when responding to a request for copies of existing material that has already had management approval in the past. When seeking management buy-off on new material, please bring two copies; one will go to Pam Richardson, who is keeping the official collection of what we have done. When providing existing material, it would be helpful if you would at least let Pam know what you provided (no copy needed as long as you identify it), so that we will have a complete record of what goes out.

Thanks.

Pete

Peter J. Rutledge, Ph.D.
Director, Enterprise Safety and Mission Assurance Division
Acting Director, Review and Assessment Division
Office of Safety and Mission Assurance
NASA Headquarters, Code QE, Washington, DC 20546

ph: 202-358-0579 FAX:202-358-2778

e-mail: pete.rutledge@hq.nasa.gov

Mission Success Starts with Safety!

```
From: "BAZAN, DEBORAH S. (DEBBIE) (JSC-NC) (GHG)"
    <deborah.s.bazan1@jsc.nasa.gov>
To: DL SRQA PAR SUPPORT < DL-SRQA-PAR-SUPPORT@ems.isc.nasa.gov>,
    "Leigh Martin (MSFC) (E-mail)" < leigh.martin@rnsfc.nasa.gov>,
    "Brenda Willis (E-mail)" <Brenda.Willis-1@ksc.nasa.gov>,
    "Alan Peterson (Boeing) (E-mail)" <alan.peterson@boeing.com>...
    "Arnold Clifton T. (E-mail)" < Clifton.Arnold@ssc.nasa.gov>,
    "Barnes Jeffrey E (Boeing) (E-mail)" < Jeffrey.Barnes@SW.Boeing.com>,
    "Bevels Vicki (E-mail)" < Vicki.W.Bevels@msfc.nasa.gov>,
    "Bill Loewy (E-mail)" <bloowy@hg.nasa.gov>.
    "Carol Rush' (E-mail)"
    <Carol.A.Rush@boeing.com>.
    "Chris Hill (MSFC) (E-mail)"
    <christopher.hill@msfc.nasa.gov>,
    "Cianciola C. (MSFC) @SMTP' (E-mail)"
    <chris.cianciola@msfc.nasa.gov>,
    "Corey Harrell (MSFC) (E-mail)"
   <Corey.Harrell@msfc.nasa.gov>,
    "Daniels Angela (E-mail)"
    <angela.daniels@msfc.nasa.gov>,
    "Darrell Warner (Boeing) (E-mail)"
   <darrell.w.warner@boeing.com>,
    "Dave Spacek (MSFC) (E-mail)"
   <David.Spacek@msfc.nasa.gov>,
    "Diana Heberling' (E-mail)"
   <dheberli@ssc.nasa.gov>,
    "donnie. george/msfc (E-mail)"
   <donnie.l.george@usahq.unitedspacealliance.com>,
    "Dumetz Marisa (E-mail)" <marisa.d.dumetz@boeing.com>,
    "Engler Tom (E-mail)" <Tom.Engler@msfc.nasa.gov>,
    "Ernest-1 Stephen (E-mail)" <Stephen.Ernest-1@ksc.nasa.gov>.
    "Fred Dadfar (MSFC) (E-mail)" <fred.dadfar@msfc.nasa.gov>,
    "Gatto Leigh(IV&V)' (E-mail)" <John.L.Gatto@ivv.nasa.gov>,
    "Gordon-1 Mark (E-mail)" < Mark.Gordon-1@ksc.nasa.gov>,
    "Gregg George (MSFC) (E-mail)" <George.H.Gregg@msfc.nasa.gov>,
    "griffith (jamss) (E-mail)" <griffith@jamssamerica.com>,
    "Haddad-1 Michael (E-mail)" < Michael . Haddad-1@ksc.nasa.gov>,
    "Hashimoto Rick (E-mail)" < Rick. Hashimoto@West. Boeing.com >,
    "Hill Bill (HQ) @SMTP' (E-mail)" <william.hill@hq.nasa.gov>,
    "Howell. Nelda' (E-mail)" < nelda.a.howell@boeing.com >.
    "James Halsell (KSC) (E-mail)" <james.halsell-1@kmail.ksc.nasa.gov>,
    "John McPherson (MSFC) (E-mail)" < john.mcpherson@msfc.nasa.gov>,
    "John. R. Dicks@ivv. nasa. gov (E-mail)" <John.R.Dicks@ivv.nasa.gov>,
   "Kennedy Michael (E-mail)" < Mike. Kennedy@msfc.nasa.gov>,
    "kim. carmean@msfc. nasa. gov (E-mail)" <kim.carmean@msfc.nasa.gov>,
   "Lackey Ed' (E-mail)" <LackeEW@kscems.ksc.nasa.gov>,
   "Leigh Martin (MSFC) (E-mail)" <leigh.martin@msfc.nasa.gov>,
```

```
"Linda Combs (E-mail)" <linda.a.combs@usahq.unitedspacealliance.com>,
     "Mark Kowalesky (HQ) (E-mail)" <mkowales@hq nasa.gov>,
     "Mike Card (HQ)"
     <mcard@hg.nasa.gov>,
     rnikesmiles <mike.smiles@ssc.nasa.gov>,
     "Moorhead-III James L (E-mail)" < James Moorhead@HSV.Boeing.com>,
     "Mr. Takeuchi(nasda) (
     "Mullane Dan (E-mail)" < Dan. Mullane@msfc.nasa.gov>
     "Nobles Noel R (E-mail)" <NOEL.NOBLES@West.Boeing.com>,
     pollystenger
     <poliy.stenger-nguyen@boeing.com>,
     rich patrican <rpatrica@hg.nasa.gov>,
     Roger Counts counts@pop300.gsfc.nasa.gov>,
     "Sandy"
     <sandra.e.hoelscher@saic.com>,
     "Sharolee Huet-1 (E-mail)"
    <Sharolee.Huet-1@ksc.nasa.gov>,
     "Sims, John (MSFC)"
    <John.Sims@msfc.nasa.gov>,
     "Sue Fenn (HQ)".<sfenn@hq.nasa.gov>,
     "Suzanne Little" <suzanne.little@usahq.unitedspacealliance.com>,
     "thomas S Toutsi (GDSFC)" <ttoutsi@pop300.gsfc.nasa.gov>.
     thomas.w.hartline@msfc.nasa.gov,
     "Tom Hancock (MSFC)"
    <tom.hancock@msfc.nasa.gov>,
     "Walker, Angelia"
    <Angelia.Walker@msfc.nasa.gov>,
     "Wbihner (E-mail)"
    <wbhher@mail.hg.nasa.gov>,
    wbostick <wade.bostick@SW.Boeing.com>,
     "Willis-1, Brenda'" < Brenda.Willis-1@ksc.nasa.gov>,
     "Wren, Robert J (USA)" < Robert J. Wren@usahg.unitedspacealliance.com >.
     "Zavala, Velma (USA)" < Velma. Zavala@usahq.unitedspacealliance.com>
Subject: STS-107 PMMT Tagup and 10P PAR Agenda (1/10/03)
Date: Tue, 7 Jan 2003 13:11:52 -0600
X-Mailer: Internet Mail Service (5.5.2653.19)
> TO:
          Distribution
> FROM: MQ/Manager, Space Shuttle SR&QA Office
> SUBJECT:
                 STS-107 PMMT Tagup and 10P PAR
> The STS-107 PMMT Tagup and 10P PAR are scheduled for Friday, January 10.
> 2003, 10:00 AM EST, 09:00 AM CST. The meeting will be teleconferenced
> from JSC Building 9, Room 2160 (PAR Room). The basic agenda is shown
> below.
```

BAZAN, DEBORAH S. (DEBBIE) (JSC-NC) (GHG), 03:11 PM 1/7/2003, STS-107 PMMT Tagup and 10

```
> Presentation material is due January 8th.
 >
      STS-107 PMMT TAGUP
      JANUARY 10, 2003
 > INTRODUCTION
                                                        JSC/NC/Mark Erminger
 > Vehicle Status (verbal
                                                        KSC
 > Crew Status (verbal)
                                                        JSC/CB
 > 1-Pager Status (verbal)
 > SPECIAL TOPICS
 > 1. SHUTTLE
    OV-103 BSTRA Crack
                                                       JSC/Bill
 > Prince
                                                              MSFC
                                                              KSC
> Action Items, Summary & Next Meeting Schedule
                                                       JSC/NC/Mark Erminger
> 10P PAR (FOLLOWING 107 PMMT TAGUP)
  JANUARY 10, 2003
> INTRODUCTION
                                                       JSC/NC/Mark Erminger
> Vehicle Status (verbal
                                                       KSC
> Crew Status (verbal)
                                                       JSC/CB
> 1-Pager Status (verbal)
> ISS 10P OVERVIEW
                                          JSC/NE/Bobbie Jenkins
> 10P PAYLOAD OVERVIEW
                                                       JSC/Jeff Nill
> SPECIAL TOPICS
> 1. STATION
                                                       JSC
> 2. INDEPENDENT ASSURANCE
> JSC Independent Assessment
                                                             JSC/Mac
> Himel
   KSC SHIA
                                                      KSC/Mark
> Gordon
   MSFC/Angelia Walker
                                                      MSFC HEDS
```

BAZAN, DEBORAH S. (DEBBIE) (JSC-NC) (GHG), 03:11 PM 1/7/2003, STS-107 PMMT Tagup and 10

> Action Items, Summary & Next Meeting Schedule

JSC/NC/Mark Erminger

>

>

> This memo is being released in accordance with Mr. Mark Erminger.

spaceupdate@SPACE.COM, 12:15 PM 2/1/2003, SPACE.com Breaking News Update: Space Shutt

Approved-By: jbaldwin@HQ.SPACE.COM

X-Mailer: Microsoft Outlook Express 6.00.2800.1106

Date: Sat, 1 Feb 2003 08:15:53 -0800 Reply-To: spaceupdate@SPACE.COM Sender: spaceupdate@SPACE.COM From: spaceupdate@SPACE.COM

Subject: SPACE.com Breaking News Update: Space Shuttle Columbia Missing on

Re-entry, Crew Presumed Lost

To: SPACECOM-HTMLJ@LISTSERV.SPACE.COM

Saturday, February 1, 2003

SPACE.com Breaking News Update
* Mission Columbia: Shuttle and Crew Presumed Lost over Texas http://www.space.com/shuttlemissions/

Recent Update:

* Columbia Missing on Re-Entry, Crew Presumed Lost http://www.space.com/missionlaunches/sts107 update 030201.html

Stay tuned to SPACE.com for continuing updates on developing story.

Related News About STS-107 and the Crew:

- * Mission Columbia: STS-107 Story and Multimedia Archive http://www.space.com/missionlaunches/sts107 mission stories.html
- * The STS-107 Crew http://www.space.com/missionlaunches/sts107_bios.html
- * Rick Husband http://www.space.com/missionlaunches/bio husband.html
- * William McCool http://www.space.com/missionlaunches/bio_mccool.html
- * Kalpana Chawla http://www.space.com/missionlaunches/bio_chawla.html
- * David Brown http://www.space.com/missionlaunches/bio david brown.html
- * Michael Anderson http://www.space.com/missionlaunches/bio-mike-anderson.html
- * Laurel Clark http://www.space.com/missionlaunches/bio-laurel_clark.html

spaceupdate@SPACE.COM, 12:15 PM 2/1/2003, SPACE.com Breaking News Update: Space Shutt

- * llan Ramon http://www.space.com/missionlaunches/bio_ramon.html
- * Space Shuttle Image Galleries http://www.space.com/php/multimedia/imagegallery/archive.php?category=se

To Unsubscribe: http://www.space.com/php/email/unsubscribe.php

Share Your Space Forward this newsletter to your friends! http://www.space.com/php/email/get_spacenews.php

jlemke, 05:49 PM 2/4/2003, Re: Supporting Bryan on the Columbia Accident Investigation

X-Authentication-Warning: spinoza.public.hq.nasa.gov: majordom set sender to owner-code-go using -f

X-Sender: jlemke@mail.hq.nasa.gov

X-Mailer: QUALCOMM Windows Eudora Version 4.3.2

Date: Tue, 04 Feb 2003 16:49:03 -0500

To: code-qe@lists.hq.nasa.gov, code-qs@lists.hq.nasa.gov

From: jlemke < jlemke@hq.nasa.gov>

Subject: Re: Supporting Bryan on the Columbia Accident Investigation

Board (CAIB)

Sender: owner-code-qe@lists.hq.nasa.gov

At 07:49 PM 2/2/2003 -0500, Pete wrote:

Attached is a rough list we prepared today of investigative areas--for the most part these are areas in which the SMA community has some special expertise. For each area we have tentatively named an OSMA lead (and in some cases more than one person to work together). If you can think of other areas that we have not captured, and should, let me know. If we've associated you with the wrong area(s) or failed to associate you with the right area(s), let me know. We don't want to disrupt the investigation--we want to be prudent; we want to help Bryan. Think about whether and how you might be able to be helpful in these areas; then, before you take any action, write down your plan in a clear, concise manner, and send it to mestate what you might be able to do and how you would propose to do it. Then wait for a goahead from Jim or me. Keep in mind that we have asked the SMA directors at JSC, MSFC, KSC, LaRC, ARC, and SSC to work with us as needed, so this can be part of your plan, if appropriate.

There have been some questions about the attachment to the above email. Therefore I'd like to parse and restate Pete's direction. The specific **action** asked of us is:

- 1. "Think about whether and how you might be able to be helpful in these areas." If your name is next to the item, this means we are asking YOU if you think there is something to be done that would be helpful. If the answer is NO--so advise your boss.
- 2. If the answer is YES: "then, before you take any action, write down your plan in a clear, concise manner, and send it to me--state what you might be able to do and how you would propose to do it." Do not work the action--explain how it could be worked--including who, what, etc. (For QS--please run the plan by me before you send to Pete.)
- 3. "Then wait for a go-ahead from Jim or me (Pete)." (Pete--please run the QS go-aheads through me with a copy to Sylvia for tracking purposes.)

Easy as 1-2-3. (QS: can we do ours by COB Thursday? Thanks.)

iohnl

John Lemke Manager, System Safety Engineering NASA HQ, Code QS 202-358-0567 FAX 358-3104

jlemke, 05:49 PM 2/4/2003, Re: Supporting Bryan on the Columbia Accident Investigation

"Mission success stands on the foundation of our unwavering commitment to safety"
Administrator Sean O'Keefe January 2003

mcard1@cox.net, 08:16 PM 2/6/2003, Payload Questions: Mike Card

To: mcard1@cox.net

From: Michael Card <mcard@hq.nasa.gov> Subject: Payload Questions: Mike Card

Cc: Bcc:

Attached: C:\Documents and Settings\mcard\My Documents\Data\attach\Payload

Questions1.doc;

jlyver@hq.nasa.gov, 07:48 PM 2/6/2003, Payload Questions: Mike Card

To: jlyver@hq.nasa.gov

From: Michael Card <mcard@hq.nasa.gov>
Subject: Payload Questions: Mike Card

Cc: Bcc:

Attached: C:\Documents and Settings\mcard\My Documents\Data\attach\Payload

Questions.doc;

See attached, mike

Mark Kowaleski, 03:08 PM 2/8/2003; STS 107 Payloads

To: Mark Kowaleski <mkowales@hq.nasa.gov> From: Michael Card <mcard@hq.nasa.gov> Subject: STS 107 Payloads

Cc: Bcc:

Attached: C:\Documents and Settings\mcard\My Documents\Data\attach\STS 107

Payloads.doc;

See enclosed, mike

All parties involved with image processing and analysis at the SOR and the Satellite Assessment Center will not release any data until further directed. Please use me as the point of contact for all data generated at Kirtland AFB, NM Bob Fugate

On 2/5/03 5:02 AM, "HESS, DAVID C. (DAVE) (JSC-ZR) (NASA)" <david.c.hess@nasa.gov> wrote:

```
> Gentlemen.
  >
 > 14AF/CC is Maj Gen Mike Hamel. I am meeting with him this morning to
  > discuss this topic. Will advise after our meeting.
 > David C. Hess
 > David C. Hess. DAF
 > Director, DoD Human Space Flight Payloads
 > DoD Space Test Program
 > email: david.c.hess1@jsc.nasa.gov
 > voice: 281.483.3498
 > fax:
         281.483.4651
 > ----Original Message----
 > From: McCann, Lt Col Jeffrey [mailto:jeffrey.mccann@maui.afmc.af.mil]
 > Sent: Tuesday, February 04, 2003 9:56 PM
 > To: 'Bob Fugate'
 > Cc: White Richard W Jr. Col SMC Det 12/ST; Stephen Mark D Col AFRL/DE;
> HESS.
> DAVID C. (DAVE) (JSC-ZR) (NASA); Nielsen Paul D MajGen AFRL/CC; Earl
> Good:
> Baker William L Civ AFRL/DE; CARD, MIKE (JSC-REMOTE)
> Subject: RE: Columbia (STS-107) Imagery
> Bob.
> I was just called (again) by Lt Coi Barnett (sp?), USSTRATCOM/J33, and
> he
> said that ALL Air Force data needs to go through the DoD prior to
> transmission to NASA (per MGen Farell (sp?), 14 AF/CC). As such, I am
> not
> sending any additional data to NASA and am waiting on a process. I have
> data to send. Lt Col Barnett's phone number is
                                                              I believe
> MGen Farell is arriving in Houston today (Tue) or tomorrow (Wed).
> Regards,
> Jeff
>
```

```
>
  > Jeffrey McCann, Lt Col, USAF
  > ----Original Message----
  > From: Bob Fugate [mailto:bob.fugate@kirtland.af.mil]
  > Sent: Tuesday, February 04, 2003 7:26 AM
  > To: Stephen Mark D Col AFRL/DE; 'david.c.hess@nasa.gov'; Earl Good;
  > Nielsen Paul D MajGen AFRL/CC; Baker William L Civ AFRL/DE; Michael Card
  > Cc: White Richard W Jr. Col SMC Det 12/ST;
  > Subject: Re: Columbia (STS-107) Imagery
 > Col Stephen,
 > Your statement below is the first I have heard that AFSPC does not want
 > sent to NASA. Am I correctly interpreting this to mean "DO NOT TRANSMIT
 > ANYTHING TO ANYONE"? We are generating some new results but will file
 > away until further directed? Bob
 >
 >
 > On 2/3/03 8:28 PM, "Stephen Mark D Col AFRL/DE"
 > <Mark.Stephen@kirtland.af.mil> wrote:
>> Hopefully, you have some data now.
>> AFSPC has asked us to cease transmission for now.
>>
>> Mark D. Stephen, Colonel, USAF
>> -----Original Message-----
>> From: HESS, DAVID C. (DAVE) (JSC-ZR) (NASA) <david.c.hess@nasa.gov>
>> To: 'Stephen Mark D Col AFRL/DE' <Mark.Stephen@kirtland.af.mil>
>> CC: White Richard W Jr. Col SMC Det 12/ST
>> <Richard.White@kirtland.af.mil>; Fugate Robert Q Civ AFRL/DES
>> <Bob.Fugate@kirtland.af.mil>; McCann Jeffrey M LtCol AFRL/DEBI
>> Sent: Mon Feb 03 10:44:18 2003
>> Subject: RE: Columbia (STS-107) Imagery
>>
>> Okay....I am not familiar with these. I do know that first email
```

```
>> address
  >> should have been jsc.nasa.gov.
  >> Would there be any way to forward that email to me with the imagery
  >> attached?
  >>
  >> David C. Hess
  >> David C. Hess, DAF
  >> Director, DoD Human Space Flight Payloads
  >> DoD Space Test Program
  >> email: david.c.hess1@jsc.nasa.gov
  >> voice: 281.483.3498
  >> fax:
           281.483.4651
 >>
  >> -----Original Message-----
 >> From: Stephen Mark D Col AFRL/DE [mailto:Mark.Stephen@kirtland.af.mil]
 >> Sent: Monday, February 03, 2003 10:40 AM
 >> To: HESS, DAVID C. (DAVE) (JSC-ZR) (NASA)
 >> Cc: White Richard W Jr. Col SMC Det 12/ST; Fugate Robert Q Civ
 > AFRL/DES;
 >> McCann Jeffrey M LtCol AFRL/DEB!
 >> Subject: RE: Columbia (STS-107) Imagery
 >>
 >> They sent the images and videos to:
 >>
 >> columbiaimages@ifc.nasa.gov
 >>
 >> Or
 >>
 >> columbiaimages@nasa.gov
>> I can't remember which, but one of the addresses didn't work
>>
>> Mark D. Stephen, Colonel, USAF
>> ----Original Message----
>> From: HESS, DAVID C. (DAVE) (JSC-ZR) (NASA) <david.c.hess@nasa.gov>
>> To: 'Stephen Mark D Col AFRL/DE' < Mark, Stephen@kirtland.af.mil>
>> CC: White Richard W Jr. Col SMC
>> <Richard.White@kirtland.af.mil>:
>> Fugate Robert Q Civ AFRL/DES <Bob.Fugate@kirtland.af.mil>; McCann
>> Jeffrey M
>> LtCol AFRL/DEB
                                                    il>
>> Sent: Mon Feb 03 09:26:06 2003
>> Subject: RE: Columbia (STS-107) Imagery
>> Can they be sent to me via email?
```

```
>> David C. Hess
   >> David C. Hess, DAF
  >> Director, DoD Human Space Flight Payloads
   >> DoD Space Test Program
   >> email: david.c.hess1@jsc.nasa.gov
  >> voice: 281.483.3498
            281.483.4651
  >> fax:
  >>
  >> ----Original Message-----
  >> From: Stephen Mark D Col AFRL/DE [mailto:Mark.Stephen@kirtland.af.mil]
  >> Sent: Monday, February 03, 2003 10:15 AM
  >> To: HESS, DAVID C. (DAVE) (JSC-ZR) (NASA); Stephen Mark D Col AFRL/DE
  >> Cc: White Richard W Jr. Col SMC Det 12/ST; Fugate Robert Q Civ
  > AFRL/DES:
  >> McCann Jeffrey M LtCol AFRL/DEBI
  >> Subject: Re: Columbia (STS-107) Imagery
  >> Importance: High
 >> Both Maui and Starfire have images. They transmitted them (or tried
 > to)
 >> to
 >> NASA on Saturday and Sunday. POCs are Dr. Bob Fugate and Lt Col Jeff
 >> McCann.
 >>
 >> Mark D. Stephen, Colonel, USAF
 >> Deputy Director, Directed Energy
 >> ----Original Message----
 >> From: HESS, DAVID C. (DAVE) (JSC-ZR) (NASA) <david.c.hess@nasa.gov>
 >> To: 'mark.stephen@kirtland.af.mil' <Mark.Stephen@kirtland.af.mil>
 >> CC: 'White Richard W Jr Col (Det 12/ST)'
 > <Richard.White@kirtland.af.mil>
 >> Sent: Mon Feb 03 06:15:13 2003
 >> Subject: Columbia (STS-107) Imagery
>> I am sitting here with Col Rich White who suggested I fire you an
> email.
>>
>> I am looking for any imagery of the Orbiter Columbia that may have
>> taken any time during the mission, and would be especially interested
> in
>> imagery taken during the descent phase. Would STARFIRE or the Maui
>> happen to have any of these? If so, I would like to get those images
>> ASAP.
```

White Richard W Jr. Col SMC Det 12/ST, 10:47 AM 2/5/2003, RE: Columbia (STS-107) Imagery

>>

>>

>>

>> David C. Hess

>> David C. Hess, DAF

>> Director, DoD Human Space Flight Payloads

>> DoD Space Test Program

>> email: david.c.hess1@jsc.nasa.gov

>> voice: 281.483.3498 >> fax: 281.483.4651

Mike Hawes, 01:43 PM 2/4/2003, Re: Fwd: Data from Maui

X-Sender: whawes@mail.hq.nasa.gov Date: Tue, 4 Feb 2003 12:43:37 -0500 To: Michael Card <mcard@hq.nasa.gov> From: Mike Hawes <whawes@hq.nasa.gov> Subject: Re: Fwd: Data from Maui

I'll contact Lee about how he is handling this. We need to figure how to characterize the AF organization and how we got the data. Hasn't Lee already gotten some of the Maui stuff? Mike

W. Michael Hawes Special Assistant to the Associate Administrator Office of Space Flight NASA Headquarters

bob.fugate@kirtland.af.mil, 11:21 AM 2/5/2003, Data

To: bob.fugate@kirtland.af.mil
From: Michael Card <mcard@hq.nasa.gov>

Subject: Data

Cc: Bcc: Attached:

Have taken steps to control data as requested. Mike